

Amendments to the Claims:

This Listing of Claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously Presented) A two-stage phasing plug assembly, comprising:
 - a first phasing plug having a rear side and a first intermediate side,
 - a first plurality of slot openings between the rear and first intermediate sides of the first phasing plug;
 - a second phasing plug having a second intermediate side and a front side;
 - a second plurality of slot openings between the second intermediate and front sides of the second phasing plug;

wherein the first plurality of slot openings on the first intermediate side of the first phasing plug is juxtaposed to the second plurality of slot openings on the second intermediate side of the second phasing plug to form a plurality of continuous air passages from the rear side of the first phasing plug to the front side of the second phasing plug.
2. (Previously Presented) A phasing plug assembly, comprising:
 - a first phasing plug;
 - a second phasing plug;

the first phasing plug having a rear side and a first intermediate side and a plurality of openings extending between the rear side and the first intermediate side, where the first intermediate side has a cavity adapted to receive the second phasing plug; and

the second phasing plug having a front side and a second intermediate side, where the second intermediate side is adapted to fit in the cavity of the first phasing plug, the second phasing plug further having a plurality of openings that align with the plurality of openings in the first phasing plug when the second phasing plug is placed in the cavity of the first phasing plug.
3. (Previously Presented) The assembly of claim 2, further including a diaphragm mounted adjacent to the rear side of the phasing plug assembly.
4. (Previously Presented) The assembly of claim 2, where the rear side of the first phasing plug is domed shaped.

5. (Previously Presented) The assembly of claim 2, where at least one of the plurality of openings in the first phasing plug forms a circle about the rear side of the first phasing plug.

6. (Previously Presented) The assembly of claim 2, where at least one of the plurality of openings in the first phasing plug forms a ring about the rear side of the first phasing plug.

7. (Previously Presented) The assembly of claim 2, where the plurality of openings in the first phasing plug are spaced substantially equidistant from each other.

8. (Previously Presented) The assembly of claim 2, where the plurality of openings in the first phasing plug forms a compression ratio from about 6:1 to about 12:1 between the rear side of the first phasing plug and the diaphragm.

9. (Previously Presented) The assembly according to claim 2, where the first and second phasing plugs are made of different materials.

10. (Previously Presented) The assembly according to claim 2, where the second phasing plug is made of plastic.

11. (Previously Presented) The assembly according to claim 2, where the first phasing plug is made of steel.

12. (Previously Presented) The assembly of claim 2, where the first phasing plug is construction from a unitary work-piece.

13. (Previously Presented) The assembly of claim 2, where the second phasing plug is assembled from at least separate two pieces.

14. (Previously Presented) The assembly of claim 2, where the second phasing plug is releasably secured against the first phasing plug such that the second phasing plug is interchangeable.

15. (Previously Presented) A phasing plug assembly, comprising:

a first phasing plug;
a second phasing plug positioned substantially adjacent to the first phasing plug,
both the first and second phasing plugs having a plurality of openings extending through both the first and second phasing plugs.

16. (Previously Presented) The assembly of claim 15, where the first phasing plug has a rear side and a first intermediate side and the second phasing plug has a second intermediate side and front side and where the first intermediate side of the first phasing plug and the second intermediate side of the second phasing plug are positioned adjacent to one another in the assembly.

17. (Previously Presented) The assembly of claim 15, where the first phasing plug has a cavity and at least a portion of the second phasing plug is adapted to fit within the cavity of the first phasing plug.

18. (Previously Presented) The assembly of claim 17, where the cavity in the first phasing plug forms a first intermediate side of the first phasing plug and where the at least a portion of the second phasing plug that is adapted to fit with the cavity of the first phasing plug forms a second intermediate side that when positioned with the cavity of the first phasing plug fits substantially flush against the first intermediate side of the first phasing plug.

19. (Previously Presented) The assembly of claim 17, where the at least a portion of the second phasing plug that first within the cavity of the first phasing plug is affixed to the first phasing plug.

20. (Previously Presented) The assembly of claim 17, where the second phasing plug substantially fills the cavity of the first phasing plug.

21. (Previously Presented) The assembly of claim 15, where the first phasing plug has a flange.

22. (Previously Presented) The assembly of claim 16, where the rear side of the first phasing plug is generally spherical in shape.

23. (Previously Presented) The assembly of claim 16, where the rear side of the first phasing plug is adapted to be positioned adjacent to a diaphragm in a speaker assembly.

24. (Previously Presented) The assembly of claim 15, where the plurality of openings are circular openings positioned about the rear side of the first phasing plug.

25. (Previously Presented) The assembly of claim 15, where the distance between the plurality of openings is about 0.5 inches.

26. (Previously Presented) The assembly of claim 15, where the plurality of openings form three rings, a first ring within a second ring, and the second ring within a third ring.

27. (Previously Presented) The assembly of claim 26, where the three rings are spaced substantially equidistant from one another.

28. (Previously Presented) The assembly of claim 15, where the plurality of openings are spaced apart from one another to minimize standing waves.

29. (Previously Presented) The assembly of claim 26, where the plurality of openings further includes a fourth ring, where the third ring is inside the fourth ring.

30. (Previously Presented) The assembly of claim 16, where the plurality of openings form a compression ratio from about 6:1 to about 12:1 between the rear side of the first phasing plug and the diaphragm.

31. (Previously Presented) The assembly of claim 15, where the first phasing plug is made of steel.

32. (Previously Presented) The assembly according to claim 15, where the second phasing plug is made of plastic.

33. (Previously Presented) The assembly according to claim 16, where the thickness between the rear side and the first intermediate side of the first phasing plug is substantially constant.

34. (Previously Presented) The assembly according to claim 15, where the second phasing plug is interchangeable.

35. (Previously Presented) The assembly of claim 15, where the first phasing plug is construction from a unitary work-piece.

36. (Previously Presented) The assembly of claim 15, where the second phasing plug is assembled from at least separate two pieces.

37. (Previously Presented) The assembly of claim 15, where the second phasing plug is constructed from a unitary work-piece.

38. (Previously Presented) The assembly of claim 16, where the plurality of openings includes a first plurality of openings and a second plurality of openings, where the first plurality of openings extend from the rear side to the first intermediate side of the first phasing plug and the second plurality of openings extends from the second intermediate side to the front side of the second phasing plug, and where the size of the first plurality of openings are substantially similar to the second plurality of openings to provide a continuous transition between the first and second plurality of openings.

39. (Previously Presented) The assembly of claim 38, where the second plurality of openings are substantially straight as they extend through the second intermediate side to the front side of the second phasing plug.

40. (Previously Presented) The assembly of claim 38, where the second plurality of openings form a curve as they extend from the intermediate side of the second phasing plug to the front side of the second phasing plug.

41. (Previously Presented) The assembly of claim 38, where the first and second phasing plugs have a center axis and where the second plurality of openings in the second phasing plug exits through the front side substantially parallel to the center axis.

42. (Previously Presented) The assembly of claim 38, where the first and second phasing plugs have a center axis, where the second plurality of openings in the second phasing plug exit through the front side at an acute angle relative to the center axis.

43. (Previously Presented) The assembly of claim 42, where the acute angle is less than about 25°.

44. (Previously Presented) The assembly of claim 38, where the first plurality of openings are substantially straight as they extend through the rear side of the first phasing plug to the first intermediate side of the first phasing plug, and the second plurality of openings substantially curve as they extend through the second intermediate side of the second phasing plug to the front side of the second phasing plug.

45. (Currently Amended) The assembly of claim 15, where the plurality of openings curve from ~~[[the]]~~ a rear side of the first phasing plug to ~~[[the]]~~ a front side of the second phasing plug as they extend through the first and second phasing plugs.

46. (Currently Amended) The assembly of claim 15, where each of the plurality of openings is of a substantially equal length measured between ~~[[the]]~~ a rear side of the first phasing plug and ~~[[the]]~~ a front side of the second phasing plug.

47. (Previously Presented) A phasing plug assembly, comprising:
a first phasing plug made of steel having a plurality of openings through the first phasing plug; and
a second phasing plug having a plurality of openings aligning with the plurality of openings in the first phasing plug when the second phasing plug is placed adjacent to the first phasing plug.

48. (Previously Presented) The assembly of claim 47, where the second phasing plug is made of steel.

49. (Previously Presented) The assembly of claim 47, where the second phasing plug is made of plastic.

50. (Previously Presented) The assembly of claim 47, where the first phasing plug is formed from a unitary steel piece.

51. (Previously Presented) The assembly of claim 47, where the second phasing plug is formed from at least two pieces.

52. (Previously Presented) The assembly of claim 47, where the first phasing plug has a rear side and a first intermediate side and the second phasing plug has a second intermediate side and front side and where the first intermediate side of the first phasing plug and the second intermediate side of the second phasing plug are positioned adjacent to one another in the assembly.

53. (Previously Presented) The assembly of claim 47, where the first phasing plug has a cavity and at least a portion of the second phasing plug is adapted to fit within the cavity of the first phasing plug.

54. (Previously Presented) The assembly of claim 53, where the cavity in the first phasing plug forms a first intermediate side of the first phasing plug and where the at least of portion of the second phasing plug that is adapted to fit with the cavity of the first phasing plug forms a second intermediate side that when positioned with the cavity of the first phasing plug fits substantially flush against the first intermediate side of the first phasing plug.

55. (Previously Presented) A method for manufacturing a phasing plug assembly, comprising:

forming a plurality of openings through a first phasing plug having a rear side and a first intermediate side; and

forming a plurality of openings through a second phasing plug having a front side and a second intermediate side so that when the first intermediate side of the first phasing plug is placed adjacent to the second intermediate side of the second phasing plug, the plurality of openings in the first phasing plug align with the plurality of openings in the second phasing plug.

56. (Previously Presented) The method according to claim 55, where the first phasing plug is made of steel and the forming of the plurality of openings through the first phasing plug is done by cutting through the steel.

57. (Previously Presented) The method according to claim 55, further including enlarging the area of the first plurality of openings as they extend from the rear side to the first intermediate side.

58. (Previously Presented) The method according to claim 55, further including forming a cavity in the first intermediate side of the first phasing plug adapted to receive the second phasing plug.

59. (Previously Presented) The method according to claim 55, further including cutting the rear side of the first phasing plug to have a dome shape adapted to be juxtaposed to a diaphragm of a compressor.

60. (Previously Presented) The method according to claim 55, further including:
casting the first phasing plug from steel to have the rear side and the first intermediate side; and
machining the rear side and the first intermediate side of the first phasing plug to have accurate dimensional tolerances in the first phasing plug.

61. (Previously Presented) The method according to claim 55, further including:
jetting water through the first intermediate side to the rear side of the first phasing plug to form the plurality of openings through the first phasing plug.

62. (Currently Amended) The method according to claim 55, further including forming the plurality of openings through the first phasing plug ~~[[sucht]]~~ such that the area of the plurality of openings increases and the openings extend from the rear side to the first intermediate side.

63. (Previously Presented) The method according to claim 55, where the second phasing plug is made of plastic.

64. (Previously Presented) The method according to claim 55, where the second phasing plug is made of at least two pieces.

65. (Previously Presented) A method for compressing air through a phasing plug assembly, comprising:

compressing air through a phasing plug assembly in at least two stages so that air passes through the first stage with better dimensional tolerances than through the second stage.

66. (Previously Presented) The method according to claim 65, forming the first stage of the phasing plug assembly with steel.

67. (Previously Presented) The method according to claim 65, forming the first stage of the phasing plug assembly from a unitary piece.

68. (Previously Presented) The method according to claim 65, forming the second stage of the phasing plug with plastic.

69. (Previously Presented) The method according to claim 65, forming the second stage of the phasing plug with at least two pieces.

70. (Previously Presented) A phasing plug assembly, comprising:
means for forming a phasing plug assembly with better dimensional tolerances on the inlet surface that is juxtaposed to a diaphragm than the opposite outlet surface of the phasing plug assembly.

71. (Previously Presented) The phasing plug assembly according to claim 70, where the phasing plug assembly is divided into a first phasing plug and a second phasing plug, where the first phasing plug is made of a material that can be formed to have better dimensional tolerance than the material used in the second phasing plug.

72. (Previously Presented) The assembly according to claim 71, where the first plurality of slots form circles around the rear side of the first phasing plug.

73. (Previously Presented) The assembly according to claim 1, where the first and second plurality of slots include three rings, a first ring within a second ring, and the second ring within a third ring.

74. (Previously Presented) The assembly according to claim 1, where the first plurality of slots are spaced substantially equal distance apart from each other.

75. (Previously Presented) The assembly according to claim 1, where the first plurality of slots form a compression ratio from about 6:1 to about 12:1 between the rear side of the first phasing plug and the diaphragm.

76. (Previously Presented) The assembly according to claim 1, where the first and second phasing plugs are made of different materials.

77. (Previously Presented) The assembly according to claim 1, where the second phasing plug is made of plastic.

78. (Previously Presented) The assembly according to claim 1, where the first phasing plug is made of steel.